



**UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office**

Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
-----------------	-------------	----------------------	---------------------

09/254,005 03/01/99 ATARASHI

T Q53451

IM62/0830
SUGHRUE MION ZINN MACPEAK & SEAS
2100 PENNSYLVANIA AVENUE NW
WASHINGTON DC 20037

EXAMINER

AHMED, S

ART UNIT

PAPER NUMBER

1773

DATE MAILED:

08/30/00

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.
09/254,005

Applicant(s)

Atarashi et al.

Examiner

Sheeba Ahmed

Group Art Unit

1773

- ☐ Responsive to communication(s) filed on _____
- ☐ This action is **FINAL**.
- ☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 35 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claim

- ☒ Claim(s) 1-8 _____ is/are pending in the application.
- Of the above, claim(s) _____ is/are withdrawn from consideration
- ☐ Claim(s) _____ is/are allowed.
- ☒ Claim(s) 1-8 _____ is/are rejected.
- ☐ Claim(s) _____ is/are objected to.
- ☐ Claims _____ are subject to restriction or election requirement.

Application Papers

- ☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.
- ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- ☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- ☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- ☒ All ☐ Some* ☒ None of the CERTIFIED copies of the priority documents have been
- ☒ received.
- ☐ received in Application No. (Series Code/Serial Number) _____
- ☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

- ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- ☒ Notice of References Cited, PTO-892
- ☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). 3
- ☐ Interview Summary, PTO-413
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Notice of Informal Patent Application, PTO-152

— SEE OFFICE ACTION ON THE FOLLOWING PAGES —

Art Unit: 1773

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

1. Claims 2-8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The claims are generally narrative and indefinite, failing to conform with current U.S. practice. They appear to be a literal translation into English from a foreign document and contain grammatical and idiomatic errors.

The language of claim 2 is awkward and the Examiner recommends amending claim 2 to recite: *"The consolidated material of coated powders according to claim 1, wherein the base particle comprises a glass, a metal, or a metal oxide and the coating film is a metal film or a metal oxide film"*.

Claim 4 is dependent on claim 3 and recites "The consolidated material of coated powders according to claim 3, ...". However, there is no antecedent basis for "The consolidated material of coated powders" in claim 3 or 4. A similar ambiguity exists in claims 5 and 6.

Art Unit: 1773

The language of claims 7 and 8 is ambiguous and appears to be a literal translation from a foreign language. For the sake of clarity, the Examiner recommends amending the language to clarify what is meant to be encompassed by the claims.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 2, and 8 are rejected under 35 U.S.C. 102(b) as being anticipated by Yamamoto et al. (US 4,859,364).

Yamamoto et al. disclose a conductive paste composition comprising particles uniformly coated with a conductive metal dispersed in an organic medium (*equivalent to the adhesive of the claimed invention; thus meeting the limitation that the coated powders are adhered by an adhesive*) (Column 1, lines 7-8 and 38-42). The conductive metal-coated particle have a metal oxide core (*equivalent to the base particle of the claimed invention*) coated with a conductive metal (*equivalent to the coating film of the claimed invention*). Titanium oxide cores are preferred however aluminum oxide, silicon oxide and glass may also be used. The conductive metal coating may be palladium, silver, platinum or copper (Column 2, lines 20-34). In one embodiment, the titanium particles preferably have an average particle size of 0.02µm and the

Art Unit: 1773

palladium is coated thereon to provide particles having an average particle size of $1\mu\text{m}$ *(therefore the palladium coating must inherently have a thickness of $0.98\mu\text{m}$; thus meeting the limitation that the coating film has a thickness between 0.01 to $5\mu\text{m}$)* (Column 2, lines 46-52).

All limitations of the claimed invention are either inherent or disclosed in the above reference.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 63286537.

JP 63286537 discloses inorganic particles *(equivalent to the base particle of the claimed invention)* surface coated with a metal material *(equivalent to the coating film of the claimed invention)*. The coated particles are used in a molding and when the molding is sintered the metal coating bonds but the fine particles do not contact each other *(thus meeting the limitation that the coated particles are mutually adhered at the coating film)*. JP 63286537 discloses the claimed invention but does not specifically state that the coating has a thickness of 0.01 to $20\mu\text{m}$. However, the Examiner takes the position that it would have been obvious to one having ordinary

Art Unit: 1773

skill in the art to have determined the optimum thickness of the coating film through routine experimentation in the absence of a showing of criticality in the claimed thickness size.

4. Claims 1-4 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Paszkiet et al. (US 5,716,552).

Paszkiet et al. disclose a conductor paste composed of metallic particles (*equivalent to the base particle of the claimed invention*) coated with a suitable barrier or cladding layer such as a ceramic (Column 2, lines 46-48) dispersed in an organic vehicle system used to bind the particles together (*equivalent to the adhesive of the claimed invention; thus meeting the limitation that the coated powders are adhered by an adhesive*)(Column 3, lines 58-63). In one embodiment, the metal particles are provided with a continuous cladding layer over which a metallic coating is deposited (*equivalent to the plural coating films of the claimed invention wherein adjacent coating films are different in kind*). The metallic coating is a conductive material such as silver, palladium or copper (Column 4, lines 34-43). Examples of suitable metal cores and cladding materials are given in Table 1. Paszkiet et al. disclose the claimed invention but does not specifically state that the coating film has a thickness of 0.01 to 20 μ m. However, the Examiner takes the position that it would have been obvious to one having ordinary skill in the art to have determined the optimum thickness of the coating film through routine experimentation in the absence of a showing of criticality in the claimed thickness size.

Art Unit: 1773

5. Claims 1, 2, and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pepin et al. (US 5,126,915).

Pepin et al. disclose conductive metal particles (*equivalent to the base particle of the claimed invention*), such as Pd, Ag, Pt, Au, Cu and Ni, having a coating of a metal oxide (*equivalent to the coating film of the claimed invention*), such as oxides of Al, Mg, Si, Ti, V, Cr, Mn, Fe, Co, Ni, Cu, Zn or W, dispersed in an organic medium (*equivalent to the adhesive of the claimed invention; thus meeting the limitation that the coated powders are adhered by an adhesive*)(Column 3, lines 40-58). Pepin et al. disclose the claimed invention but does not specifically state that the coating film has a thickness of 0.01 to 20 μ m. However, the Examiner takes the position that it would have been obvious to one having ordinary skill in the art to have determined the optimum thickness of the coating film through routine experimentation in the absence of a showing of criticality in the claimed thickness size.

6. Claims 1, 2, 5, 6, and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Truong et al. (US 5,965,194).

Truong et al. disclose magnetic particles (*equivalent to the magnetic base particle of the claimed invention*) which are coated with a continuous aluminum hydrous oxide coating (*equivalent to the dielectric coating film of the claimed invention*) and are disposed in a polymeric binder (*equivalent to the adhesive of the claimed invention; thus meeting the limitation that the coated powders are adhered by an adhesive*) when used in magnetic


Art Unit: 1773


recording media (Column 1, lines 10-30). Any kind of magnetic particle may be used and examples include ferric oxides (Column 5, lines 33-40). Truong et al. disclose the claimed invention but does not specifically state that the coating film has a thickness of 0.01 to 20 μ m. However, the Examiner takes the position that it would have been obvious to one having ordinary skill in the art to have determined the optimum thickness of the coating film through routine experimentation in the absence of a showing of criticality in the claimed thickness size.

Conclusion

7. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Sheeba Ahmed whose telephone number is (703) 305-0594. The Examiner can normally be reached on Monday-Friday from 8am to 5pm.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Paul Thibodeau, can be reached at (703) 308-2367. The fax phone number for the organization where this application or proceeding is assigned is (703) 305-5436.


Sheeba Ahmed
August 23, 2000


Paul Thibodeau
Supervisory Patent Examiner
Technology Center 1700